

JAN 09 2007

AVAGO TECHNOLOGIES, LTD.
P.O. Box 1920
Denver, Colorado 80201-1920

ATTORNEY DOCKET NO. 70020717-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Chee

Serial No.: 10/687,078

Examiner: Huffman, Julian

Filing Date: September 18, 2003

Group Art Unit: 2853

Title: Print Mechanism Utilizing an Optical Imaging Sensor to Sense the Print Medium

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- ☐ Response/Amendment ☐ Petition to extend time to respond
- ☐ New fee as calculated below ☐ Supplemental Declaration
- ☒ No additional fee (Address envelope to "Mail Stop Amendments")
- ☒ Other: Reply Brief (Fee \$ _____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS		MINUS		= 0	X 50	\$ 0
INDEP. CLAIMS		MINUS		= 0	X 200	\$ 0
<input type="checkbox"/> FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ 360	\$ 0
EXTENSION FEE	1 ST MONTH 120.00 <input type="checkbox"/>	2 ND MONTH 450.00 <input type="checkbox"/>	3 RD MONTH 1020.00 <input type="checkbox"/>	4 TH MONTH 1590.00 <input type="checkbox"/>		\$ 0
					OTHER FEES	\$ 0
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$ 0 to Deposit Account 50-3718. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 50-3718 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 50-3718 under 37 CFR 1.16, 1.17, 1.19, 1.20 and 1.21. A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,

Chee

By

Calvin B. Ward
Attorney/Agent for Applicant(s)

Reg. No. 30,896

Date: Jan 9, 2007

Telephone No. (925) 855-0413

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Date of facsimile: Jan 9, 2007

Typed Name: Calvin Ward

Signature: 

AVAGO TECHNOLOGIES, LTD.
P.O. Box 1920
Denver, Colorado 80201-1920

JAN 09 2007
ATTORNEY DOCKET NO. 70020717-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Chee

Serial No.: 10/667,078

Examiner: Huffman, Julian

Filing Date: September 18, 2003

Group Art Unit: 2853

Title: Print Mechanism Utilizing an Optical Imaging Sensor to Sense the Print Medium

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- ☐ Response/Amendment ☐ Petition to extend time to respond
☐ New fee as calculated below ☐ Supplemental Declaration
☒ No additional fee (Address envelope to "Mail Stop Amendments")
☒ Other: Reply Brief (Fee \$ _____)

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS		MINUS		= 0	X 50	\$ 0
INDEP. CLAIMS		MINUS		= 0	X 200	\$ 0
<input type="checkbox"/> FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ 360	\$ 0
EXTENSION FEE	1 ST MONTH 120.00 <input type="checkbox"/>	2 ND MONTH 450.00 <input type="checkbox"/>	3 RD MONTH 1020.00 <input type="checkbox"/>	4 TH MONTH 1590.00 <input type="checkbox"/>		\$ 0
					OTHER FEES	\$ 0
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$0 to Deposit Account 50-3718. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 50-3718 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 50-3718 under 37 CFR 1.16, 1.17, 1.19, 1.20 and 1.21. A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,

Chee

By

Calvin B. Ward
Attorney/Agent for Applicant(s)

Reg. No. 30,896

Date: Jan 9, 2007

Telephone No. (925) 855-0413

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below:

Date of facsimile: Jan 9, 2007

Typed Name: Calvin Ward

Signature:

RECEIVED
CENTRAL FAX CENTER

JAN 09 2007

PATENT APPLICATION

Attorney Docket: 70020717-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Applicant: Chee
Serial No.: 10/667,078
Filed: 9/18/2003
For: Print Mechanism Utilizing an Optical Imaging Sensor to Sense the
Print Medium
Group Art Unit: 2853
Examiner: Huffman, Julian

REPLY BRIEF FOR APPELLANT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This reply brief is filed in response to the revised Examiner's answer dated 1/22/2007, in which the Examiner vacated the previous answer dated 4/6/2006 in the appeal of the final rejection in the above-identified patent application. This brief addresses new arguments made in the Examiner's answer that were not part of the original Examiner's arguments in the final office action.

With respect to Claims 1 and 5, the Examiner now argues that the term "image" is limited to the teachings in the specification independent of whether or not those teachings define the term and cites Phillips in support of this proposition. Phillips reaffirms the proposition that the terms are to be given the meaning that would be understood by a person skilled in the art when reading the specification. The Examiner does not present evidence as to what someone skilled in the art would understand. Instead, the Examiner looks at the words and attempts to limit the claim language to the specific examples in the specification.

While Applicant disagrees with the Examiner's interpretation of the law on this matter, the Examiner's position still does not support the rejection for anticipation of these claims. The only examples of the image and imaging devices specifically discussed in the specification are as follows:

The present invention assumes that the portion of the print mechanism exposed next to the edge of the paper has a significantly different reflectivity than that of the paper. For example, the paper is fed over a roller in some inkjet printers, and hence, the position detector views the surface of the roller in those regions of the roller that are not covered by the paper. For the purpose of the present discussion, it will be assumed that the area next to the paper is substantially darker than the paper. The image generated by the position detector is preferably a plurality of pixel values organized as a plurality of rows that run in the direction of travel of the print head. Hence, each horizontal line in the image in the vicinity of the edge of the paper will be a "step" function that is white over the paper and dark over the print carriage. Algorithms for detecting the point at which the image transitions between a dark and a light region are known to the art, and hence, will not be discussed in detail here. For the purposes of the present discussion, it is sufficient to note that a threshold can be defined that distinguishes the paper from the underlying paper carriage mechanism. Portions of the image having a brightness greater than this threshold are assumed to be over the paper, and portions of the image having a brightness less than or equal to this threshold are assumed to be over the print carriage. (page 4, starting at line 6 of the specification)

The above-described embodiments of the present invention utilize a two-dimensional image sensor in the position detector. The two-dimensional image sensor described above is preferred since such sensors are mass-produced for use in optical mouse pointing devices, and hence, are available at a cost that is compatible with low cost inkjet printers. However, embodiments that utilize one-dimensional sensors can also be practiced. The detection of the vertical edges of the paper can be accomplished with a one-dimensional image sensor comprising a single row from the image sensor described above. Similarly, the detection of the top and bottom edges of the paper can be accomplished with a one-dimensional image sensor comprising a single column from the image sensor described above. (page 6, starting at line 16 of the specification)

The first paragraph refers to an image having a plurality of rows of pixel values. The Examiner's interpretation of Endo, at best, refers to a single row of values one bit binary values, and there is no teaching that the individual values are ever recorded to form an image. The second paragraph is directed to the physical form of the image sensor. It discloses two-dimensional image sensors of the type used in optical mice and two possible one dimensional image sensors. The devices used in optical mice are well known to be two-dimensional arrays of photodetectors, not a single photodetector. The remaining one-dimensional image sensors are either a column or row from such a two-dimensional sensor. Again, these devices include a plurality of photodetectors, not a single photodetector as taught in Endo.

The Examiner then looks to the statement in the first paragraph that the image in the region of the edge is a step function, as defining the broadest interpretation of what is meant by determining the location for at least one of the edges of the print medium from the formed image. First, the sentence above points out that algorithms for making this determination are known to the art. The portion discussed by the Examiner is merely one example of such an algorithm. Second, the claim requires that **the location be determined from the image formed by the position detector**. However, the Examiner has not pointed to any teaching in Endo of forming an image. In fact, Endo teaches using a predetermined threshold to define the edge of the print medium [127]. There is no teaching that the threshold is determined differently for each sheet of print medium, no less from an image of a portion of the sheet. Hence, Endo does not teach determining the location of the edge from an image of the print medium even if one were to accept the Examiner's definition of an image.

The Examiner further asserts that "the specification does not describe any structure which is capable of forming an image of the type described in the dictionary definition." In fact, Figure 2 of the specification clearly shows such a structure 20, and the paragraph beginning at line 30 of Page 3 refers to it as an imaging section. The final sentence of that paragraph explains that "light from the illuminated portion of the surface is imaged by the imaging section onto a sensor 21 with the aid of a lens assembly 22." Hence, the specification does indeed describe a structure capable of forming an image in accordance with the dictionary definition.

With respect to Claims 2 and 8, the Examiner looks to the teaching of Endo in which the presence or absence of the paper is determined by detecting the intensity of light reflected from the paper and comparing that to a predetermined threshold value as satisfying the limitation of determining a brightness value for the print medium. The Examiner cites the above mentioned paragraph [127] of Endo for support. As noted above, the passage refers to comparing the signal with a predetermined threshold that is not derived from the signal of the print medium when the detector is over the print medium. That signal depends on factors other than the brightness of the paper. Hence, absent further processing, the system of Endo does not determine a brightness value.

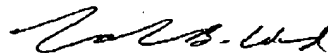
With respect to the rejection of Claim 10 in view of Endo and Wen, the Examiner now states that the rejection under 103 merely states that it would be obvious to use the sensor of Endo to determine the length and width of the print medium. In effect, the Examiner is now making a new rejection based on Endo alone. But, as noted above, Endo does not teach forming an image and making determinations from that image. Hence, even this new ground for rejection is flawed.

With respect to the rejection of Claims 11-12 in view of Endo and Miyakawa, first, the Examiner argues that detecting whether a media is transparent and controlling the amount of ink deposited does prohibit altering the amount of ink based on a determination of the brightness of the medium. The issue is not whether the reference prohibits the claimed limitation, but rather whether the reference teaches the claimed limitation. The Examiner has the burden of showing the teaching. Applicant is not required to prove that the teaching is prohibited by the reference.

The Examiner then goes on to note that Miyakawa teaches that the photosensors can be of the reflective type, and hence, the sensors measure a brightness value. The type of sensor does not determine the measurement made. A reflective sensor can detect a transparent medium by the lack of a signal just as the transmissive sensor detects the transparent medium by the presence of the signal. A transparent medium has no "reflectivity", and hence, the device does not make a comparison of brightness values to determine the amount of ink that is dispensed. As previously noted, the device of Miyakawa dispenses the same amount of ink on all opaque media, independent of the reflectivity of the medium.

I hereby certify that this paper (along with any others attached hereto) is being sent in triplicate via facsimile to fax number: 571-273-8300.

Respectfully Submitted,



Calvin B. Ward
Registration No. 30,896

Date: January 9, 2007

Avago Technologies, LTD.
P.O. Box 1920
Denver, CO 80201-1920
Telephone (925) 855-0413
Telefax (925) 855-9214

RECEIVED
CENTRAL FAX CENTER

JAN 09 2007

PATENT APPLICATION

Attorney Docket: 70020717-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Applicant: Chee
Serial No.: 10/667,078
Filed: 9/18/2003
For: Print Mechanism Utilizing an Optical Imaging Sensor to Sense the
Print Medium
Group Art Unit: 2853
Examiner: Huffman, Julian

REPLY BRIEF FOR APPELLANT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This reply brief is filed in response to the revised Examiner's answer dated 1/22/2007, in which the Examiner vacated the previous answer dated 4/6/2006 in the appeal of the final rejection in the above-identified patent application. This brief addresses new arguments made in the Examiner's answer that were not part of the original Examiner's arguments in the final office action.

With respect to Claims 1 and 5, the Examiner now argues that the term "image" is limited to the teachings in the specification independent of whether or not those teachings define the term and cites Phillips in support of this proposition. Phillips reaffirms the proposition that the terms are to be given the meaning that would be understood by a person skilled in the art when reading the specification. The Examiner does not present evidence as to what someone skilled in the art would understand. Instead, the Examiner looks at the words and attempts to limit the claim language to the specific examples in the specification.

While Applicant disagrees with the Examiner's interpretation of the law on this matter, the Examiner's position still does not support the rejection for anticipation of these claims. The only examples of the image and imaging devices specifically discussed in the specification are as follows:

The present invention assumes that the portion of the print mechanism exposed next to the edge of the paper has a significantly different reflectivity than that of the paper. For example, the paper is fed over a roller in some inkjet printers, and hence, the position detector views the surface of the roller in those regions of the roller that are not covered by the paper. For the purpose of the present discussion, it will be assumed that the area next to the paper is substantially darker than the paper. The image generated by the position detector is preferably a plurality of pixel values organized as a plurality of rows that run in the direction of travel of the print head. Hence, each horizontal line in the image in the vicinity of the edge of the paper will be a "step" function that is white over the paper and dark over the print carriage. Algorithms for detecting the point at which the image transitions between a dark and a light region are known to the art, and hence, will not be discussed in detail here. For the purposes of the present discussion, it is sufficient to note that a threshold can be defined that distinguishes the paper from the underlying paper carriage mechanism. Portions of the image having a brightness greater than this threshold are assumed to be over the paper, and portions of the image having a brightness less than or equal to this threshold are assumed to be over the print carriage. (page 4, starting at line 6 of the specification)

The above-described embodiments of the present invention utilize a two-dimensional image sensor in the position detector. The two-dimensional image sensor described above is preferred since such sensors are mass-produced for use in optical mouse pointing devices, and hence, are available at a cost that is compatible with low cost inkjet printers. However, embodiments that utilize one-dimensional sensors can also be practiced. The detection of the vertical edges of the paper can be accomplished with a one-dimensional image sensor comprising a single row from the image sensor described above. Similarly, the detection of the top and bottom edges of the paper can be accomplished with a one-dimensional image sensor comprising a single column from the image sensor described above. (page 6, starting at line 16 of the specification)

The first paragraph refers to an image having a plurality of rows of pixel values. The Examiner's interpretation of Endo, at best, refers to a single row of values one bit binary values, and there is no teaching that the individual values are ever recorded to form an image. The second paragraph is directed to the physical form of the image sensor. It discloses two-dimensional image sensors of the type used in optical mice and two possible one dimensional image sensors. The devices used in optical mice are well known to be two-dimensional arrays of photodetectors, not a single photodetector. The remaining one-dimensional image sensors are either a column or row from such a two-dimensional sensor. Again, these devices include a plurality of photodetectors, not a single photodetector as taught in Endo.

The Examiner then looks to the statement in the first paragraph that the image in the region of the edge is a step function, as defining the broadest interpretation of what is meant by determining the location for at least one of the edges of the print medium from the formed image. First, the sentence above points out that algorithms for making this determination are known to the art. The portion discussed by the Examiner is merely one example of such an algorithm. Second, the claim requires that the location be determined from the image formed by the position detector. However, the Examiner has not pointed to any teaching in Endo of forming an image. In fact, Endo teaches using a predetermined threshold to define the edge of the print medium [127]. There is no teaching that the threshold is determined differently for each sheet of print medium, no less from an image of a portion of the sheet. Hence, Endo does not teach determining the location of the edge from an image of the print medium even if one were to accept the Examiner's definition of an image.

The Examiner further asserts that "the specification does not describe any structure which is capable of forming an image of the type described in the dictionary definition." In fact, Figure 2 of the specification clearly shows such a structure 20, and the paragraph beginning at line 30 of Page 3 refers to it as an imaging section. The final sentence of that paragraph explains that "light from the illuminated portion of the surface is imaged by the imaging section onto a sensor 21 with the aid of a lens assembly 22." Hence, the specification does indeed describe a structure capable of forming an image in accordance with the dictionary definition.

With respect to Claims 2 and 8, the Examiner looks to the teaching of Endo in which the presence or absence of the paper is determined by detecting the intensity of light reflected from the paper and comparing that to a predetermined threshold value as satisfying the limitation of determining a brightness value for the print medium. The Examiner cites the above mentioned paragraph [127] of Endo for support. As noted above, the passage refers to comparing the signal with a predetermined threshold that is not derived from the signal of the print medium when the detector is over the print medium. That signal depends on factors other than the brightness of the paper. Hence, absent further processing, the system of Endo does not determine a brightness value.

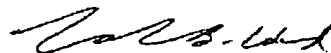
With respect to the rejection of Claim 10 in view of Endo and Wen, the Examiner now states that the rejection under 103 merely states that it would be obvious to use the sensor of Endo to determine the length and width of the print medium. In effect, the Examiner is now making a new rejection based on Endo alone. But, as noted above, Endo does not teach forming an image and making determinations from that image. Hence, even this new ground for rejection is flawed.

With respect to the rejection of Claims 11-12 in view of Endo and Miyakawa, first, the Examiner argues that detecting whether a media is transparent and controlling the amount of ink deposited does prohibit altering the amount of ink based on a determination of the brightness of the medium. The issue is not whether the reference prohibits the claimed limitation, but rather whether the reference teaches the claimed limitation. The Examiner has the burden of showing the teaching. Applicant is not required to prove that the teaching is prohibited by the reference.

The Examiner then goes on to note that Miyakawa teaches that the photosensors can be of the reflective type, and hence, the sensors measure a brightness value. The type of sensor does not determine the measurement made. A reflective sensor can detect a transparent medium by the lack of a signal just as the transmissive sensor detects the transparent medium by the presence of the signal. A transparent medium has no "reflectivity", and hence, the device does not make a comparison of brightness values to determine the amount of ink that is dispensed. As previously noted, the device of Miyakawa dispenses the same amount of ink on all opaque media, independent of the reflectivity of the medium.

I hereby certify that this paper (along with any others attached hereto) is being sent in triplicate via facsimile to fax number: 571-273-8300.

Respectfully Submitted,



Calvin B. Ward
Registration No. 30,896

Date: January 9, 2007

Avago Technologies, LTD.
P.O. Box 1920
Denver, CO 80201-1920
Telephone (925) 855-0413
Telefax (925) 855-9214

RECEIVED
CENTRAL FAX CENTER

JAN 09 2007

PATENT APPLICATION

Attorney Docket: 70020717-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS

Applicant: Chee
Serial No.: 10/667,078
Filed: 9/18/2003
For: Print Mechanism Utilizing an Optical Imaging Sensor to Sense the
Print Medium
Group Art Unit: 2853
Examiner: Huffman, Julian

REPLY BRIEF FOR APPELLANT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This reply brief is filed in response to the revised Examiner's answer dated 1/22/2007, in which the Examiner vacated the previous answer dated 4/6/2006 in the appeal of the final rejection in the above-identified patent application. This brief addresses new arguments made in the Examiner's answer that were not part of the original Examiner's arguments in the final office action.

With respect to Claims 1 and 5, the Examiner now argues that the term "image" is limited to the teachings in the specification independent of whether or not those teachings define the term and cites Phillips in support of this proposition. Phillips reaffirms the proposition that the terms are to be given the meaning that would be understood by a person skilled in the art when reading the specification. The Examiner does not present evidence as to what someone skilled in the art would understand. Instead, the Examiner looks at the words and attempts to limit the claim language to the specific examples in the specification.

While Applicant disagrees with the Examiner's interpretation of the law on this matter, the Examiner's position still does not support the rejection for anticipation of these claims. The only examples of the image and imaging devices specifically discussed in the specification are as follows:

The present invention assumes that the portion of the print mechanism exposed next to the edge of the paper has a significantly different reflectivity than that of the paper. For example, the paper is fed over a roller in some inkjet printers, and hence, the position detector views the surface of the roller in those regions of the roller that are not covered by the paper. For the purpose of the present discussion, it will be assumed that the area next to the paper is substantially darker than the paper. The image generated by the position detector is preferably a plurality of pixel values organized as a plurality of rows that run in the direction of travel of the print head. Hence, each horizontal line in the image in the vicinity of the edge of the paper will be a "step" function that is white over the paper and dark over the print carriage. Algorithms for detecting the point at which the image transitions between a dark and a light region are known to the art, and hence, will not be discussed in detail here. For the purposes of the present discussion, it is sufficient to note that a threshold can be defined that distinguishes the paper from the underlying paper carriage mechanism. Portions of the image having a brightness greater than this threshold are assumed to be over the paper, and portions of the image having a brightness less than or equal to this threshold are assumed to be over the print carriage. (page 4, starting at line 6 of the specification)

The above-described embodiments of the present invention utilize a two-dimensional image sensor in the position detector. The two-dimensional image sensor described above is preferred since such sensors are mass-produced for use in optical mouse pointing devices, and hence, are available at a cost that is compatible with low cost inkjet printers. However, embodiments that utilize one-dimensional sensors can also be practiced. The detection of the vertical edges of the paper can be accomplished with a one-dimensional image sensor comprising a single row from the image sensor described above. Similarly, the detection of the top and bottom edges of the paper can be accomplished with a one-dimensional image sensor comprising a single column from the image sensor described above. (page 6, starting at line 16 of the specification)

The first paragraph refers to an image having a plurality of rows of pixel values. The Examiner's interpretation of Endo, at best, refers to a single row of values one bit binary values, and there is no teaching that the individual values are ever recorded to form an image. The second paragraph is directed to the physical form of the image sensor. It discloses two-dimensional image sensors of the type used in optical mice and two possible one dimensional image sensors. The devices used in optical mice are well known to be two-dimensional arrays of photodetectors, not a single photodetector. The remaining one-dimensional image sensors are either a column or row from such a two-dimensional sensor. Again, these devices include a plurality of photodetectors, not a single photodetector as taught in Endo.

The Examiner then looks to the statement in the first paragraph that the image in the region of the edge is a step function, as defining the broadest interpretation of what is meant by determining the location for at least one of the edges of the print medium from the formed image. First, the sentence above points out that algorithms for making this determination are known to the art. The portion discussed by the Examiner is merely one example of such an algorithm. Second, the claim requires that the **location be determined from the image formed by the position detector**. However, the Examiner has not pointed to any teaching in Endo of forming an image. In fact, Endo teaches using a predetermined threshold to define the edge of the print medium [127]. There is no teaching that the threshold is determined differently for each sheet of print medium, no less from an image of a portion of the sheet. Hence, Endo does not teach determining the location of the edge from an image of the print medium even if one were to accept the Examiner's definition of an image.

The Examiner further asserts that "the specification does not describe any structure which is capable of forming an image of the type described in the dictionary definition." In fact, Figure 2 of the specification clearly shows such a structure 20, and the paragraph beginning at line 30 of Page 3 refers to it as an imaging section. The final sentence of that paragraph explains that "light from the illuminated portion of the surface is imaged by the imaging section onto a sensor 21 with the aid of a lens assembly 22." Hence, the specification does indeed describe a structure capable of forming an image in accordance with the dictionary definition.

With respect to Claims 2 and 8, the Examiner looks to the teaching of Endo in which the presence or absence of the paper is determined by detecting the intensity of light reflected from the paper and comparing that to a predetermined threshold value as satisfying the limitation of determining a brightness value for the print medium. The Examiner cites the above mentioned paragraph [127] of Endo for support. As noted above, the passage refers to comparing the signal with a predetermined threshold that is not derived from the signal of the print medium when the detector is over the print medium. That signal depends on factors other than the brightness of the paper. Hence, absent further processing, the system of Endo does not determine a brightness value.

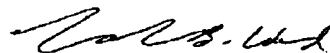
With respect to the rejection of Claim 10 in view of Endo and Wen, the Examiner now states that the rejection under 103 merely states that it would be obvious to use the sensor of Endo to determine the length and width of the print medium. In effect, the Examiner is now making a new rejection based on Endo alone. But, as noted above, Endo does not teach forming an image and making determinations from that image. Hence, even this new ground for rejection is flawed.

With respect to the rejection of Claims 11-12 in view of Endo and Miyakawa, first, the Examiner argues that detecting whether a media is transparent and controlling the amount of ink deposited does prohibit altering the amount of ink based on a determination of the brightness of the medium. The issue is not whether the reference prohibits the claimed limitation, but rather whether the reference teaches the claimed limitation. The Examiner has the burden of showing the teaching. Applicant is not required to prove that the teaching is prohibited by the reference.

The Examiner then goes on to note that Miyakawa teaches that the photosensors can be of the reflective type, and hence, the sensors measure a brightness value. The type of sensor does not determine the measurement made. A reflective sensor can detect a transparent medium by the lack of a signal just as the transmissive sensor detects the transparent medium by the presence of the signal. A transparent medium has no "reflectivity", and hence, the device does not make a comparison of brightness values to determine the amount of ink that is dispensed. As previously noted, the device of Miyakawa dispenses the same amount of ink on all opaque media, independent of the reflectivity of the medium.

I hereby certify that this paper (along with any others attached hereto) is being sent in triplicate via facsimile to fax number: 571-273-8300.

Respectfully Submitted,



Calvin B. Ward
Registration No. 30,896

Date: January 9, 2007

Avago Technologies, LTD.
P.O. Box 1920
Denver, CO 80201-1920
Telephone (925) 855-0413
Telefax (925) 855-9214